

I am writing in opposition to the petition of ReconRobotoics, Inc., for a waiver to provide for operation of its device within the 430-448 MHz range.

Placement of this device in this frequency range, which is within the 70 cm Amateur band, has a high potential for interference which could lead to the loss of life. Due to this possibility of loss of life, this waiver is not in the public interest, convenience, or necessity.

The comments that have been posted by various law-enforcement officials make clear that a device such as the Recon Scout can be an invaluable aid to law enforcement and other emergency workers. But for it to serve that purpose, it must operate on a frequency where it can operate reliably and without interference. For example, in his comments, Steve Glick states that "the signal must be reliable and able to penetrate to users outside the building." This reliability is important because "lives are often in danger," as the comments of the Sacramento County Sheriff's Department state. More than one commenter mentioned that this device will be used when "lives are on the line." Indeed, Petitioner makes clear that the device is to be "used only in actual emergencies involving threats to safety of life and for necessary training."

Given the mission-critical nature of this device, the choice of frequencies in the 430-448 MHz range is an extremely poor one, because of the number of Amateur Radio Operators who could inadvertently cause interference to the device while it is serving its critical mission.

Petitioner concedes that it "does not seek interference protection from any licensed user". Nor would such protection be possible, given the large number of Amateur Radio Operators using the frequency range in question.

The Petitioner is probably correct in stating that it is very unlikely that an Amateur user of the 70 cm band will experience any harmful interference from this device. This is due to the limited use of the device, and its relatively low power. Indeed, if I were aware that the device were being used in a life-critical mission, I would voluntarily tolerate any interference that it might cause, and I'm sure most other Amateurs would agree.

But what the Petition fails to address (other than to concede that the device would not be entitled to any interference protection) is that sharing spectrum with hundreds of thousands of other users could render the device inoperable when it is needed most. Most or all of the contacts I have made on the 70 cm Amateur band have been within Channel A or Channel C of the proposed device. This device would be operating with one watt of power, and probably transmitting from a less than optimal location, such as inside a building. While one watt would probably be sufficient to penetrate most buildings for video and data transmission, the resulting signal is likely to be quite weak. A stronger

signal being transmitted on the same frequency, probably by someone who was totally unaware of the life-and-death situation, would be very likely to interfere with this weak signal. This sort of interference is very foreseeable, and if it were to take place, it would probably render the Recon Robot totally useless when it is needed most.

I am a licensed amateur radio operator (W0IS). While I am not a major user of the 70 cm Amateur band, I have used that frequency band for at least 149 contacts since 2003. Most of these contacts were from random mobile locations throughout Minnesota, Iowa, Wisconsin, and Illinois.

All of my operation on the 70 cm band has been with a power of five watts or less. But given the circumstances under which the Recon Robot would be operating, it is likely that even my five watt signal, even if transmitted from a few miles away, would render the Recon Robot inoperative. Stronger signals, which are common on this band, could cause harmful interference from an even further distance.

In other words, had a Recon Robot been in operation within a mile or so of my location in one of those four states on any of those 149 occasions, it is very likely that I would have inadvertently caused harmful interference.

Moreover, the individuals operating the Recon Robot, who would presumably be police officers who are not necessarily trained in radio theory, would not even be aware of the source of the interference. Amateur antennas for the 70 cm band can be quite small (a quarter-wave antenna would be only six inches long). Thus, the user who was causing interference wouldn't even be displaying a tell-tale large antenna. And depending on the power being used, this user could be miles away. Law enforcement officers and other workers would have no way of identifying or notifying an Amateur as to the interference that was being caused. Even if the officer suspected that the Recon Robot was not working because of interference from another radio transmitter, he or she would have no way to overcome that interference, even though by definition, the device will be used "when lives are in danger". In most cases, the officer operating the robot would not know why the device was malfunctioning--he would know only that it went dead when he or she needed it most.

The Petitioner has submitted no supporting data that would show that its device could fulfill its life and safety critical mission in the likely event of a local Amateur station transmitting on its frequency. Indeed, if such tests were to be conducted, it is likely that the device would fail.

Because of the likelihood that this device could fail when it is needed most, a grant of this waiver would not be in the public interest, convenience, or necessity. Instead, the Petitioner should be encouraged to seek an allocation where its important product could operate free from harmful interference.

Therefore, I respectfully request that this petition must be denied.